



Design and Technology Topic: Design & Create a Controllable Puppet.

Year: 3 Term: Autumn 1

Key Knowledge/Content:

- Developing design criteria from a design brief.
- Generating ideas using thumbnail sketches and exploded diagrams.
- Selecting materials due to their functional and aesthetic characteristics.
- Using the views of others to improve designs.
- Testing and modifying the outcome, suggesting improvements.

Links to:

Prior learning:

To research design, make and evaluate a moving chair. The children researched mechanisms and explored the components needed and their functions.

Future learning:

To research, design and make and evaluate a spinner.

Key vocabulary with definition:

Prior vocabulary:

- Output- Power, energy or what it produces.
- Input- Any type of motion and force.
- Process – A series of actions or steps.
- Machine – A device that carries out a task.

New vocabulary:

- Thumbnail sketch- A small quick drawing that can help you to plan out a, larger painting or drawing.
- Motion – The action or process of moving or being moved.
- Functional - Of or having a special activity, purpose, or task.
- Exploded diagram - Show how a product can be assembled and how the separate parts fit together, with dotted lines showing where the parts slide into place.

By the end of this unit

All children can: recognise what components are needed to make a mechanical system and can **create** a design with a specific user.

Most children can: demonstrate how to make a mechanical system and **explain** the steps to success when building their mechanical system.

Some children can: demonstrate and **explain** how their design suits their specific user and **explain** how to test their product and why they have chosen that method.

Background understanding for teachers and parents:

The children are going to design a puppet, explore a mechanical system, make and evaluate a product. The children will look carefully at the components of a mechanical system and identify methods to test their product.

Curriculum Driver (one):

Communication

Evidence outcome:

The children are going to communicate the mechanical system. The children are going to discuss a variety of methods to test their product.